



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

11.0

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,509	10/01/2003	Ho-Chul Shin	P56911	4232

7590 02/01/2007
Robert E. Bushnell
Suite 300
1522 K Street, N.W.
Washington, DC 20005

EXAMINER

LENNOX, NATALIE

ART UNIT	PAPER NUMBER
----------	--------------

2609

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/01/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/674,509	SHIN ET AL.	
	Examiner	Art Unit	
	Natalie Lennox	2609	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/01/2003</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: claim 5 cites a display unit reproducing operation status display information of the robot, however this limitation is not taught in the applicant's disclosure.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 6, and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Nonaka (US Patent 7,127,497).

As per claim 1, Nonaka teaches a system (see Fig. 26) for controlling a home robot, comprising:

a home server (80, Fig. 26) responsive to a user's command (e.g. mail from agent access server 3) for controlling said home robot, said home server and said home robot being in a same premises (Col. 20, lines 15-18, also Col. 21, lines 5-14);

said home robot (81, Fig. 26) being controlled to perform only in response to command result signals generated by said home server (80), said command result signals being generated in response to said user's command (Col. 20, lines 15-18, also Col. 21, lines 5-14).

As per claim 2, Nonaka teaches the system according to claim 1, said user's command being transmitted as a wireless local area network (WLAN) signal to said home server via said home robot for analysis by said home server (Col. 21, lines 5-14, also Col. 7, lines 9-22).

As per claim 6, Nonaka teaches the system according to claim 1, further comprising a network for communication with one or more service servers, said service servers having software modules for downloading to said home server, each service server being utilized to generate a corresponding command for controlling said home robot (Col. 20, lines 19-29, also Col. 4, lines 1-6).

As per claim 7, Nonaka teaches a method for operating a home robot using a home server, the method comprising the steps of:

Receiving a voice service request analog-to-digital at the home robot, for converting the voice, and transmitting the voice to the home server through wireless communication (Col. 21, lines 5-17).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nonaka (US Patent 7,127,497) as applied to claim 1 above, and further in view of Song et al. (US 2002/0153185).

As per claim 3, Nonaka teaches the system according to claim 1, said home server comprising: An internal communication unit generating and receiving wireless local area network (WLAN) signals for communicating with said home robot (wireless communication function - Col. 20, lines 32-34); a voice recognition unit for performing a voice recognition function on voice signals constituting said user's commands and providing command information to said control unit, based on recognition of said voice signals, to said control unit for analyzing the user's commands in response to the command information (voice recognition program, Col. 21, lines 9-14); and a voice synthesizing unit for producing a digital voice signal when said control unit determines that said command information requires a voice response (Col. 21, lines 9-17, it would have been obvious to one having ordinary skill in the art that the mail reading software used to convert the mail into voice data (text-to-speech) is a type of voice synthesizer and the signal it produces is digital as it is clearly cited on lines 15-17), but Nonaka doesn't specifically mention the home server having a control unit for analyzing the user's commands, where said wireless local area network (WLAN) signals comprises said user's command, and a home robot driving managing unit for producing motion control signals to be transmitted to said robot to control movements of said home robot, said digital voice signal and said motion control signals being transmitted to said home robot via said control unit and said internal communication unit as said command result signals. Song et al. teach a home server having a central control unit (paragraph [0079]), which includes a memory that has a driver that

Art Unit: 2609

controls the robot (paragraphs [0079] and [0080]). It would have been obvious to one having ordinary skill in the art to have use the feature of a control unit and driving managing unit as taught by Song et al. for Nonaka's home server because it reduces the processing load of the robot and permits the external handling of storage and analysis processes for the robot.

6. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nonaka (US Patent 7,127,497) as applied to claim 1 above, and further in view of Sakaue et al. (US Patent 6,347,261).

As per claim 4, Nonaka teaches the system according to claim 1, said robot comprising: a microphone for receiving the user's command as an external voice command signal from the user and converting the voice command signal into an electric command signal (Col. 20, lines 45-60); an analog-to-digital converter for converting the electric command signal to a digital command signal (Col. 20, lines 45-60); a wireless communication unit for converting the digital command signal into a wireless command signal and transmitting the wireless command signal to said home server, and for receiving a wireless command result signal from the home server, said wireless communication unit converting the wireless command result signal into a digital command result signal (Col. 20, lines 45-60); a digital-to-analog converter for converting a digital voice signal to an analog voice signal when said digital voice signal is included with said digital command result signal (Col. 20, lines 45-60); a speaker for producing an audio voice signal in response to the analog voice signal from said digital-to-analog converter (Col. 20, lines 45-60), and a control unit receiving said digital command result signal from the wireless command unit and analyzing said digital command result signal to control one or more actions of

Art Unit: 2609

said home robot, and based on said analysis, said control unit outputting one or more of said digital voice signal, motion control signals and an image signal (Col. 20, lines 35-38), but Nonaka doesn't specifically mention having a driving unit for moving body components of said home robot in response to one or more of said motion control signals from the control unit, each motion control signal being determined by the analysis performed by said control unit on said digital command result signal; and a display unit for displaying an image in response to said image signal. Sakaue et al. further teaches a driver (Col. 8, lines 39-43, also Col. 9, lines 10-16) and a display (Col. 8, lines 39-43, also Cols. 9 line 66 – Col. 10 line 1). It would have been obvious to one of ordinary skill in the art to use the features of a driver and a display as taught by Sakaue et al. for Nonaka's robot because Sakaue et al. provide a system where the movements of user are recognized and stored as gestures to be expressed by a robot, through which interaction with a robot and a user is produced.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nonaka (US Patent 7,127,497) in view of Sakaue et al. (US Patent 6,347,261) as applied to claim 4 above, and further in view of Shercliff (US Patent 6,155,835).

As per claim 5, Nonaka in view of Sakaue et al. teach the system according to claim 4, but they don't specifically mention that the display unit reproduces the operation status display information of the home robot. Shercliff further teaches an LCD display capable of displaying text and visual images (Col. 3, lines 32-35). It would have been obvious to one of ordinary skill in the art to use the feature of a display with information display capabilities as taught by Shercliff to Nonaka's and Sakaue et al.'s system because it is preferred that the apparatus

Art Unit: 2609

comprise a display capable of displaying graphics, text information, and/or other forms of visual data.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lathan et al. (US Patent 6,895,305) teaches a robotic apparatus and wireless communication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie Lennox whose telephone number is (571) 270-1649. The examiner can normally be reached on Monday to Friday 7:30 am - 5:00 pm (EST).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Xiao Wu can be reached on (571) 272-7761. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Art Unit: 2609

NL

01/19/2007

A handwritten signature in black ink, appearing to read 'Xiao Wu', is positioned above the printed name.

XIAO WU
SUPERVISORY PATENT EXAMINER